International Carnivorous Plant Society 2012 Conference Field Trip

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It was almost midnight on the 15th of August and there I was driving down some highway in North Carolina. Koji Kondo, Naoki Tanabe, Tsutomu Takahashi, and Yasuhiko Matsushita from Japan were all in the back of the van. Daryt Frank from Los Angeles was sitting in the passenger seat next to me and I looked in the rearview mirror to find Joel Koos from Long Island, New York following behind me. In that van were Dennis Balsdon and Tim Bailey from England, Marcel van den Broek from Holland, then Adam Cross and Robert Gibson from Australia.

We were all attendees of the 9th International Carnivorous Plant Society Conference, which was hosted by the New England Carnivorous Plant Society in Seekonk, Massachusetts. Once the conference was over, there were additional field trips available (Fig. 1). On the first day, there was a tour of two former commercial cranberry bogs in Cape Cod, to view some of the last known *Drosera filiformis* locations in the wild in New England. The New England Carnivorous Plant Society had provided a bus to transport the group and the first stop was Mother's Bog in Brewster, Massachusetts, owned by the Brewster Conservation Trust. Near the cultivated flatlands where the commercial harvests once took place, there was a shallow borrow pit which collects rain water on and off throughout the year, which contained a plant community of a coastal plains pond. *Drosera filiformis* along with the other native New England sundews, *D. intermedia* and *D. rotundifolia* were found there along with *Sabatia kennedyana*, *Coreopsis rosea*, and the clubmoss *Lycopodiella appressa*. The next stop was in nearby Harwich to visit the Bank Street Bog owned by the Harwich Conservation Trust, which is very similar to, but much larger than, Mother's Bog. We found another healthy population of *D. filiformis* with *D. intermedia*, and some *Utricularia*.

The final destination for the day was a *Sarracenia purpurea* population in North Dartmouth, Massachusetts. After bushwhacking through the brush and trudging through standing water, the group



Figure 1: The 9th International Carnivorous Plant Society Conference field trippers. Back Row (left to right): Marcel van den Broek, Sheila Stewart, Mark Todd, Tim Bailey, Robert Gibson, Dennis Balsdon, Peter D'Amato, Damon Collingsworth. Front Row: Tsutomu Takahashi, Koji Kondo, Yasuhiko Matsushita, Naoki Tanabe, Matt Kaelin, Adam Cross, Joel Koos, Daryt Frank.

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came across some old abandoned railroad tracks before we got to a small, open swamp that supported dozens of *S. purpurea* in the hummocks of *Sphagnum* surrounded by an Atlantic white cedar forest.

The second day of the field trip was mostly spent travelling to and settling in to Wilmington, North Carolina. On the third day, we contacted Mark Todd, the head of conservation for the North American Sarracenia Conservancy (NASC), who had offered to be our guide since he lives in the area and knows it well. Mark and Sheila Stewart, the treasurer of NASC, met us at our hotel in Wilmington, North Carolina. The first place to visit was the famous Green Swamp. We parked at the front gate and wandered over to an adjacent pond which had thousands of *Utricularia juncea* in flower with *Drosera intermedia* accompanying them. We followed a trail into the Green Swamp itself, which is open and grassy savannah land with scattered trees thickening around the edges of the clearings into denser thickets of brush and forest. There were longleaf pines (Pinus palustris) in the bottlebrush stage of their development, looking pre-historic and almost like something from the ancient Carboniferous Period. We followed a wooden planked trail cut through a forest wall thick with trees and brush, and once on the other side, we discovered the first Venus Flytraps (Dionaea muscipula) of the trip, accompanied by some fine examples of Drosera capillaris. We continued on and found great clusters of Sarracenia flava, many of which had resident lynx spiders living on them. The S. flava seemed to be the dominant of the carnivorous plants here with many clumps being typical var. flava, with some var. cuprea, var. maxima, and possibly var. rugelii. As we were winding our way across the grassy savannahs with their intermittent trees providing all too-little shade, we came across S. minor and S. alata. There were a couple of spots that had Drosera brevifolia scattered about. The air was thick and heavy with humidity and the sun and heat were taking their toll, so we decided it was time to march back to the vans and get back on the road.

Our next stop was Myrtle Head, which is a location where NASC had sponsored a prescribed burn to clear the competing vegetation and restore the carnivorous plant habitat. The ditches alongside an open and sunny trail were filled with carnivorous plants. There were outstanding Venus Flytraps growing at the open sunny edges of the roadside ditch with the stiff, upright leaves normally seen in the spring. *Drosera capillaris* and *D. brevifolia* were scattered about as well as some of the finest specimens of *Pinguicula lutea* we would see. *Sarracenia flava* and *Utricularia juncea* were growing in shallow puddles. The burn area appeared to be desolate scorched earth, but we saw the emergent growth of many *Sarracenia purpurea* and *S. flava* poking from the charred remains of what had been competing vegetation.

We then set off for an area known as the Old Dock, one of the few surviving natural habitats of *Drosera filiformis* in North Carolina. Unfortunately, in August the plants seemed to have already finished for the season, having shrunk back to their dormant buds. The growing season for these plants starts and finishes much earlier than their northern cousins in Cape Cod. Nearby there was a long dirt road through some woods that had trenches along both sides filled with fairly deep water. On the wet slopes of these trenches were the best *Sarracenia minor* seen so far and quite a few *S. purpurea*.

The last location for the day was a natural bog depression behind the Alderman Elementary School named the Stanley Rehder's Plant Trail. This great site was cultured by Stanley Rehder, known locally as "The Flytrap Man". A walking path was built through the bog that contains the native North Carolina carnivorous plants with some non-native *Sarracenia leucophylla*. This was used by Rehder as an educational tool to introduce people, especially children, to these wonders of the natural world. Stanley Rehder died on 1 October 2012 at the age of 90 years — just a few weeks after we visited the Stanley Rehder's Plant Trail.

Darkness was falling, and so we trudged back to the vans, closing out our first long and exhilarating day in the field. At the hotel, we chanced across Peter D'Amato and Damon Collingsworth from

the Sonoma Valley of California, who had just arrived from touring the carnivorous plant habitats of New Jersey. The two of them were here to join our group for the rest of the North Carolina tour.

On the fourth day of the expedition we were to visit two large locations managed by The Nature Conservancy that are normally closed to the public, and so this should be quite the opportunity for us indeed. Our first destination was the Mclean Savannah where we met Angie Carl of The Nature



Figure 2: Detail of *Dionaea muscipula* traps in a sunny, wet area in the Mclean Savannah.

Conservancy. The Nature Conservancy periodically burns the savannahs to keep them open from the encroaching grasses and woody shrubs. When we stepped out of our vehicles, we found hundreds of little *Drosera brevifolia* scattered at our feet filling in the sandy areas in any open spaces between the low grasses. We took a short walk and came across our first Flytraps of the day, as well as some splendid *Drosera capillaris*. As we continued down the trail, we found more and more Venus Flytraps, large and richly colored from basking in the full sunlight (Fig. 2). The wet soil they were growing in began to transition to full puddles of water and so we backtracked. We eventually came across huge numbers of Flytraps in the middle of the trail; their many gaping mouths emerging from the greenery of the surrounding plants. We understood how they received the common name of meadow-clams as only the traps were visible, poking out and resting upon a bed of the other low-growing vegetation with their open mouths appearing as indeed, a bed of clams on the seafloor.

These were pleasant woods to walk through, with pockmarked and ruddy sandy trails cutting through the forest of pine trees surrounded by dense brush where the land is fairly flat, with little perceptible variation of elevation.

We continued on to the next location managed by The Nature Conservancy known as Shaken Creek. Here The Nature Conservancy partners with a hunting club that owns the land. As we were driving, the surrounding forest vegetation began to open up and we started to notice *Sarracenia flava* growing along the edges of the road, and then there were more and more of them until we came upon fully open fields with numerous, huge stands of *S. flava* pitchers all thrusting out from the earth in great jagged clumps scattered about the landscape (Fig. 3).

We promptly parked the vehicles and embarked into these broad fields where we found three varieties of *Sarracenia flava*: the lovely typical variety *flava*, the elaborately veined variety *ornata*, and the striking red-throated variety *rugelii*. A green anole (*Anolis carolinensis*) was perched on top of one of the *Sarracenia flava* pitchers (Fig. 4). Luckily, he remained completely unconcerned by the presence of so many photographers crowding around him. A moment later he jumped across to another pitcher to catch and eat a cricket before disappearing into the tall grasses.

There were also enormous spreading clusters of *S. purpurea* subsp. *venosa* bearing dozens of their squat, bulbous pitchers and also their hybrid with *Sarracenia flava*: *Sarracenia* × *catesbaei*. There were the many low-growing carnivorous plants in the grassy undergrowth: *Dionaea muscipula*, *Dro*-

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Figure 3: Large population of *Sarracenia flava* in open field of Savanna land in Shaken Creek location.



Figure 4: Anole lizard resting on the pitcher lid of *Sarracenia flava* in the Shaken Creek location. The fleeting mascot of the 2012 ICPS Conference field trip.

sera capillaris, D. brevifolia, and Pinguicula lutea, all interspersed throughout the Savannah understory, competing with and contemplating one another's strategies.

While we were moving across this field, searching for any carnivorous plants we could find, we came to a spot where the brush had thickened and then opened to a pocket with some small rain-fed ponds. Here we found *Utricularia purpurea*. Its tell-tale lovely miniature purple flowers poked out through the surface of the pond's water with the casual nonchalance as if it were a terrestrial wildflower in the soil. However, when we looked past the water's dark surface to the scenery below, we saw continuing from these flowers, a great branching network of stolons from which sprout the suspended bladders that capture and ingest countless minute creatures of the pond.

Just around the corner, there was much less grass and far fewer *Sarracenia flava*. Instead the area contained mostly lower growing plants with *Dionaea muscipula*, *Drosera capillaris*, *D. brevifolia*, and *Pinguicula lutea* in the understory. The competing plants

were few, the habitat was open, and so the plants received much more light and certainly had much better color. Clouds came rolling across the sky and began to dull the sunlight, and by now it was time for us to be on our way. As we were driving out of the preserve, we chanced across some puddles on the side of the road which supported such an interesting habitat that we stopped to investigate. What first caught our attention were the wild bog orchids, but we also found numerous examples of Drosera intermedia spreading prolifi-

cally around the habitat, and, most interesting, were the *Utricularia subulata* growing in the wet sand with their flowers unopened — identified by their short, crooked, and wiry flower-scapes.

On the morning of day five, we were driving our caravan of three minivans and a sedan through the cozy communities of Carolina Beach with their colorful houses and shops lining the road. First we stopped at the Kure Beach fishing pier to visit the picturesque beaches. Then we continued further down Cape Fear to visit the Fort Fisher State Historic Site which is where a pivotal battle of the American Civil War took place and is now a National Historic Landmark. From there we continued to the dock where we were to take a ferry across Cape Fear River to pay homage to Arthur Dobbs' grave.

After disembarking from the ferry, we soon arrived at the ruins of the Brunswick Town Historical Center which today are part of the National Register of Historic Places. Unfortunately, the graves are all unmarked so it was impossible to identify which grave was indeed Arthur Dobbs'. Still, we were able to pay our respects to the one who discovered the Venus Flytrap, arguably the most famous and recognizable carnivorous plant of them all. Not far from the historical center, we saw a large alligator sunning himself on the roadside bank of Orton Pond. The surrounding trees had great amounts of the Spanish moss, *Tillandsia usneoides*, hanging from the branches. We also stopped briefly at the Boiling Springs Lakes to visit their source.

These were all pleasant diversions, but now it was time for us to get back to the wild natural habitats of North Carolina's carnivorous plants. So Mark led us through a nicely manicured suburban neighborhood before we came to an opening in the surrounding woods. We entered through this opening and drove along dirt roads where we passed many signs advertising for future development. We noticed the woods around us were cleared. Extending from their border, there were miniature cliffs that descended to level sandy plains. There were ruts in the ground with puddles of water. The carnivorous plants each had their preferred zones of the habitat. For example, Venus Flytraps seemed to prefer the crests and bottoms of the miniature cliffs and the multitudes of *Drosera brevifolia* favored the drier outskirts of the sandy plains. Large *Drosera intermedia*, with great skirts of leaves around their raised rosettes, emerged from the wettest areas and finally the *Sarracenia flava* were found standing along the edges of the puddles. We found the most exceptional examples of *Drosera capillaris* along the wetter centers of the sandy plains (Fig. 5).

Next we were on our way to a location that was notable for having Venus Flytraps with an exceptionally red coloration. The place was also known for having a wide range of other carnivorous plants such as: *Sarracenia rubra*, *S. purpurea*, *Drosera capillaris*, *D. brevifolia*, *D. intermedia*,

and Utricularia inflata. The habitat was to be similar to the last, with wet ruts along the side of a dirt road through the woods where the carnivorous plants would grow along the outer edges of the path. But when we arrived, we found to our shock that the entire road was plowed over with wood chips to stabilize the roads for logging trucks to drive through the area. The place was a disaster site for carnivorous plants, and we were deeply saddened by this sight.



Figure 5: *Drosera capillaris* plant in wet sandy soil along a trail in the woods near a suburban neighborhood.

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With heavy hearts from that experience, we continued on to the next location which did lift our spirits. Along the side of an unassuming paved road near Camp Pretty Pond, there was a low, wet ditch. After this ditch, there was a slope leading up to the higher elevation where the drier pine forest, thick with scrub brush, took over. The exposed and sunny slope towards the road was where the Venus Flytraps could be found. They grew in great batches with richly colored voracious mouths popping out from the surrounding grasses and emergent shrubs.

At this point, the day was ending and we collected ourselves to depart from that last location just as the final glow of daylight was leaving the sky. The next morning we were to set out towards Raleigh Airport and continue on our separate ways, but for that particular moment, we were all standing around the cars on the side of the road and having the time of our lives laughing about all the great things we had seen and done throughout our fantastic voyage on the International Carnivorous Plant Society 2012 Conference Field Trip.



